Modesto Junior College

Course Outline of Record Report

10/18/2022

CMPET314 : IT Support Fundamentals 4

General Information

Faculty Author:	• Tim Vaughan • Cazares, Jose • Mendez, Pedro
Attachments:	Class Capacity Updated CMPET 311 to 314.pdf TestOut-PC-Pro-Objectives.pdf CompTIA-Aplus-220-1002-objectives.pdf CompTIA-Aplus-220-1001-objectives.pdf C-ID_Descriptor_ITIS_110.pdf
Course Code (CB01) :	CMPET314
Course Title (CB02) :	IT Support Fundamentals 4
Department:	Computer Electronics
Proposal Start Date:	MJC Fall 2023
TOP Code (CB03) :	(0708.00) Computer Infrastructure and Support
CIP Code:	(11.1003) Computer and Information Systems Security/Auditing/Information Assurance.
SAM Code (CB09) :	Clearly Occupational
Distance Education Approved:	No
Is Distance Education Course:	No
Course Control Number (CB00) :	No value
Curriculum Committee Approval Date:	Pending
Board of Trustees Approval Date:	Pending
External Review Approval Date:	Pending
Course Description:	Based on standards set by the Computer Technology Industry Association (CompTIA A+), this course prepares students for part 2 of the TestOut PC Pro Certification. Topics printing, mobile devices, system implementation, file management, system management, and security. Students are required to pass the certification exam for the TestOut PC Pro Certification as the culminating activity for this course. Students identify potential career objectives and create an education plan for elective courses in the program.
Proposal Type:	New Course This course is part of a major revision of the Computer Electronics program to better serve students who wish to enter a career path in the field of Computer Technology Support and to update the program to current industry standards.
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Discipline(s)

Master Discipline Preferred:

- Computer Service Technology

Bachelors or Associates Discipline Preferred:

- Computer Service Technology
- Electronic Technology (Radio, television, computer repair, avionics)

Course Coding

Basic Skill Status (CB08)

Course is not a basic skills course.

Allow Students to Gain Credit by Exam/Challenge

Rationale For Credit By Exam/Challenge

Student who have completed certification can request credit by exam challenge.

Course Support Course Status (CB26)

Course is not a support course

Course Special Class Status (CB13)

Course is not a special class.

Repeatability

0

Type of Repeat

No value

Grading

- A-F or P/NP

Course Prior To College Level (CB21)

No value

Allow Students To Audit Course

Associated Programs

Course is part of a program (CB24)

Associated Program	Award Type	Active
Computer Support Technician (Level 1) (In Development)	Certificate of Achievement	MJC Fall 2023
Computer Electronics (Level 4) (In Development)	A.S. Degree	MJC Fall 2023
Drone Technician Certificate (In Development)	Certificate of Achievement	MJC Summer 2022
Computer Support Specialist (Level 2) (In Development)	Certificate of Achievement	MJC Fall 2023
Computer Electronics (Level 3) (In Development)	Certificate of Achievement	MJC Fall 2023

Transferability & Gen. Ed. Options

Course General Education Status (CB25)

Y

Transferability (CB05)

Not transferable

Transferability Status

Not transferable

Field Trips

Field trips are required.

- ( ) Yes
- ( ) No
- (•) Maybe

Comparable Lower-Division Courses at UC/CSU v2

Courses numbered 100-299 require identification two comparable lower-division courses from CSU or UC from the current institutional catalog (not schedule). At least one course from CSU, and if requesting/maintaining UC general elective transfer, one course from UC. Please identify the CSU campus offering this course. (Term type is indicated in parentheses)

No Value

CSU Catalog Year

No Value

Provide the CSU course code (e.g., ENGL 1A) from the most current official Catalog (not schedule). Curriculum changes each year.

No Value

CSU Course Title

No Value

Does course-to-course or lower-division, "major prep" articulation with this course exist for this academic year?

No Value

Select the institution that offers the second comparable course from CSU or UC. If seeking or maintaining UC transferability, you must supply a UC campus. (Term type is indicated in parentheses)

No Value

CSU/UC Catalog Year

No Value

Provide the CSU course code (e.g., ENGL 1A) from the most current official Catalog (not schedule). Curriculum changes each year.

No Value

CSU Course Title

No Value

Does course-to-course or lower-division, "major prep" articulation with this course exist for this academic year?

No Value

Select the institution that offers the third comparable course from CSU or UC. If seeking or maintaining UC transferability, you must supply a UC campus if not already provided above. (Term type is indicated in parentheses)

No Value

CSU/UC Catalog Year

No Value

Provide the CSU/UC course code (e.g., ENGL 1A) from the current official Catalog (not schedule). Curriculum changes each year.

No Value

CSU Course Title

No Value

Does course-to-course or lower-division, "major prep" articulation with this course exist for this academic year?

No Value

Units and Hours

Summary

Minimum Credit Units (CB07)	2.5
Maximum Credit Units (CB06)	2.5
Total Course In-Class (Contact) Hours	99
Total Course Out-of-Class Hours	36
Total Student Learning Hours	135

Credit / Non-Credit Options

Course Credit Status (CB04)

Credit - Degree Applicable

Course Non Credit Category (CB22)

Credit Course.

Non-Credit Characteristic

No Value

Course Classification Code (CB11)

Credit Course.

Funding Agency Category (CB23)

Not Applicable.

☐ Cooperative Work Experience Education Status (CB10)

☐ Variable Credit Course

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	1	2
Laboratory Hours	4.5	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	52.5
Course In-Class (Contact) Hours	

Activity Hours	0	0	Lecture	18
			Laboratory	81
			Activity	0
			Total	99
			Course Out-of-Class Hours	
			Lecture	36
			Laboratory	0
			Activity	0
			Total	36

Time Commitment Notes for Students

No value

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Prerequisites, Corequisites, and Advisories

Advisory

CMPET313 - IT Support Fundamentals 3 (in-development)

Requisite Skills

Requisite Skills	Description
Given a scenario, install and configure laptop hardware and components.	• CMPET 313 - Given a scenario, install and configure laptop hardware and components.
Given a scenario, install and configure a basic wired/wireless SOHO network.	• CMPET 313 - Given a scenario, install and configure a basic wired/wireless SOHO network.

Specifications

Methods of Instruction

Methods of Instruction (Typical)	INSTRUCTIONAL METHODS
MOI	1. Lecture 2. Laboratory demonstrations 3. Instructor-led course topic discussions 4. Presentations via media (DVD, Videos, etc) 5. Instructor-guided laboratory exercises 6. Possible field trips

Assignments (Typical)

Evidence of Workload for Course Units (Quantity)

1. Weekly reading assignments from the text and handouts.
2. Weekly homework problems and research from the text and handouts.
3. Weekly laboratory projects that are completed outside of class to be replicated and tested in lab.

Evidence of Critical Thinking (Quality)

1. Given a set of symptoms, select a list of possible causes that should be evaluated to diagnose the problem on a network.
2. Select appropriate hardware for a network installation.
3. Select the best test to be performed to evaluate a possible cause of a network error.
4. Given a particular mobile application, determine the best hardware to run it.
5. Estimate the cost of a network system upgrade.
6. Write a list of questions to ask a computer user when doing an initial evaluation of problems experience by user when working with a mobile device

Methods of Evaluation (Typical)	Rationale
FORMATIVE EVALUATION	1. Written exercises and/or problems that demonstrate and reinforce the fundamental principles of each course topic 2. Laboratory exercises and/or problems that demonstrate and reinforce the fundamental principles of each course topic 3. Written examinations including problems and tasks that require the students to demonstrate mastery of technology support skills.
SUMMATIVE EVALUATION	1. A Final examination in the form of a simulation of the portion of Computer Trade Industry Association (CompTIA) A+ Certification Exams covered by this course.

Equipment

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
TestOut Corporation	PC Pro	TestOut Corporation	2020	978-1-935080-42-8

Other Instructional Materials

No Value

Textbook Exceptions and Supplementals

Title of Other Material

No Value

Who prepared or published this supplemental material?

No Value

Publish date

No Value

Are any of the textbook editions cited on this proposal considered "Classics" (typically with a publish date more than 5 years old)?

- [ ] Yes
- [x] No
- [ ] Unsure

If yes, explain why this older text is used in the course. Reasons should focus on content only.

No Value

Materials Fees v2

Is there a materials fee for this course?

No

Provide a cost breakdown for all items provided for a materials fee. Each item must become "tangible personal property" of student upon payment of the fee and completion of the course.

No Value

Explain how these materials are related to the Student Learning Objectives for the course.

No Value

Explain how the materials have continuing value outside the classroom.

No Value

Is the amount of the material the student receives commensurate with the fee paid AND with the amount of material necessary to achieve the Student Learning Objectives for the course AND provided as the district's actual cost?

No Value

If no is checked, explain why.

No Value

If the district is NOT the only source of these materials, explain why the students have to pay a fee to the district rather than supply the materials themselves. (Cost savings? Health/Safety? Consistency/Uniformity?)

No Value

Learning Outcomes and Objectives

Course Objectives

Compare and contrast common operating system types and their purposes.

Compare and contrast features of Microsoft Windows versions.

Summarize general OS installation considerations and upgrade methods.

Summarize application installation and configuration concepts.

Given a scenario, configure Microsoft Windows networking on a client/desktop.

Given a scenario, use features and tools of the Mac OS and Linux client/desktop operating systems.

Summarize the importance of physical security measures.

Explain logical security concepts.

Compare and contrast wireless security protocols and authentication methods.

Compare and contrast social engineering, threats, and vulnerabilities.

Compare and contrast the differences of basic Microsoft Windows OS security settings.

Given a scenario, implement security best practices to secure a workstation.

Given a scenario, implement methods for securing mobile devices.

Given a scenario, implement appropriate data destruction and disposal methods.

Given a scenario, configure security on SOHO wireless and wired networks.
Given a scenario, troubleshoot Microsoft Windows OS problems.
Given a scenario, troubleshoot and resolve PC security issues.
Given a scenario, use best practice procedures for malware removal.
Given a scenario, troubleshoot mobile OS and application issues.
Given a scenario, troubleshoot mobile OS and application security issues.
Compare and contrast best practices associated with types of documentation.
Given a scenario, implement basic change management best practices.
Given a scenario, implement basic disaster prevention and recovery methods.
Explain common safety procedures.
Explain environmental impacts and appropriate controls.
Explain the processes for addressing prohibited content/ activity, and privacy, licensing, and policy concepts.
Given a scenario, use proper communication techniques and professionalism.
Identify the basics of scripting.
Given a scenario, use remote access technologies.
Lab Objectives

Given a scenario, use appropriate Microsoft command line tools.

Given a scenario, use Microsoft operating system features and tools.

Given a scenario, use Microsoft Windows Control Panel utilities.

Given a scenario, detect, remove, and prevent malware using appropriate tools and methods.

Identify potential career and educational objectives.

CSLOs

Troubleshoot a system startup process. Expected SLO Performance: 0.75

Upgrade, configure, or troubleshoot a computer network. Expected SLO Performance: 0.75

Content

Course Content

1. Printing
    1. Printers
    2. Printer Configuration
    3. Network Printing
    4. Printing Management
    5. Printer Maintenance
    6. Printer Troubleshooting
2. Mobile Devices
    1. Laptops
    2. Laptop Components
    3. Laptop Power Management
    4. Laptop Troubleshooting
    5. Mobile Devices
    6. Mobile Device Networking
    7. Mobile Device Security
    8. Mobile Device Troubleshooting
3. System Implementation
    1. Component Selection
    2. Windows Pre-Installation
    3. Windows Installation
    4. Post-Installation
    5. Virtualization
4. File Management
    1. Windows File Locations
    2. Manage Files on Windows
    3. NTFS Permissions

4. Shared Folders
5. Linux File Management

5. System Management
    1. Windows System Tools
    2. Preferences and Settings
    3. Performance Monitoring
    4. Active Directory
    5. Users and Groups
    6. Remote Services
    7. Windows Application Management
    8. Linux Application Management
    9. Digital Content Management
    10. Updates
    11. System Backup
    12. System Recovery
    13. Virtual Memory
    14. Operating System Troubleshooting
    15. Windows Boot Errors
6. Security
    1. Security Best PracticesIncident Response
    2. Physical Security
    3. Social Engineering
    4. BIOS/UEFI Security
    5. Malware Protection
    6. Authentication
    7. File Encryption
    8. Network Security
    9. Firewalls
    10. Proxy Servers
    11. Virtual Private Networks (VPN)
    12. Security Troubleshooting
7. Computer Support Career Preparation
    1. Education and Training
    2. Finding a Job
    3. Prepare for TestOut PC Pro Certification
    4. TestOut PC Pro Certification Review
    5. TestOut PC Pro Certification Exam
    6. Preparing for the CompTIA A+ Certification Exams
    7. CompTIA A+ Certification Practice Exams
    8. Identify potential career and educational objectives.

Lab Content

1. Select and Install a Printer
2. Edit Power Options
3. Configure iPad Access Control and Authentication
4. Manage Mobile Devices
5. Prepare Disks for Installation
6. Install an Workstation Image using PXE
7. Create Virtual Machines
8. Manage Files and Folders
9. Share and Secure Folders
10. Use System Commands
11. Join a Workstation to a Domain
12. Manage Users and Groups
13. Configure Remote Services
14. Manage Applications

Recommended Course Content

Recommended Course Content

No Value

Recommended Lab Content

No Value

Distance Education (DE) Addendum

Is this course being proposed for Distance Education? If so, select Yes below from the list in the dropdown and complete the questions. If no, select No and skip all questions.

- Yes

Modality Type:

- Hybrid
- Online

Methods of Instruction:

- Asynchronous Discussion
- Viewing and Listening to Videos
- Listening to Audio Materials
- Online Activities
- Facilitated Discussions
- Written Assignments
- Community Activities
- Reading Course Materials
- Quizzes, Exams, and Surveys
- Multimedia Presentations
- Collaborative Peer/Group Activities
- Guest Speakers
- Interactive Activities
- Field Trips
- Group Meetings/Review Sessions (hybrid only)
- Synchronous Discussion
- On-campus Orientation Sessions (hybrid only)

If Other is selected for Methods of Instruction, please describe:

No Value

Describe how the methods of instruction selected above will allow students to meet the course's learning outcomes:

Instruction will use a variety of on-line teaching methods to support students ability to learn and apply concepts, content and course learning objectives for the course. Instruction will be delivered via Canvas and Confer Zoom methods in support of synchronous and asynchronous instruction. 1. Viewing and listening to videos provides the student directed training. 2. Online activities and facilitated discussions provides firsthand instruction, relates information to industry standards through experience and discussion and gives time for questions and answers that normally happen in a classroom environment 3. Reading course materials will supplement the video.

Describe how the methods selected will be presented in an accessible way (Title 5 §55206). For information about accessibility standards in online classes, see the OEI Rubric, Section D (Copy this link and paste in a separate browser to visit OEI Rubric: https://onlinenetworkofeducators.org/course-design-academy/online-course-rubric/)

All live stream lecture, recorded lectures and videos audio will closed caption. Canvas files will be in forms accessible to the visually impaired. Facilitated discussions will be provided live via Zoom. This allows directed discussion that allows for adjustments and modification depending on student learning styles and paces. Training videos are self-paced and subtitled. Submitted projects are completed in steps to ensure provisions for additional instruction as needed. Textbook provides additional resource for student learning through required reading. Multimedia presentations are coordinated with the assigned textbook reading to supplement understanding of material.

Regular and Effective Contact (REC) Methods and Examples: Select the methods below that ensure regular effective contact (REC) will take place among students and among students and faculty (Title 5 §55204) by being initiated by the instructor, regular and frequent, and meaningful or of an academic nature. Select the methods of REC that may be used:

No Value

REC Among students: How will students interact with each other in the course? What methods will be used? Check all that apply.

- Discussion Boards
- Q & A Discussion Boards
- Group Projects
- Peer Review

REC Among students and faculty: How will faculty interact with students in the course? What methods will be used? Check all that apply

- Announcements
- Q & A Discussion Boards
- Assignment Feedback
- Office Hours
- Discussion Boards
- The Online Course Syllabus
- Email
- Video Conferencing Technology (e.g. Zoom, MS Teams, etc...)

Other Methods of REC among students and among students and faculty. Please describe and provide example(s).

No Value

In hybrid or teleclass courses, describe what parts of the course are done face-to-face and what parts are done online.

Lab would be the face-to-face part, everything else would be online or remote.

Checkoff List

Does this proposal meet the five development criteria as stated in the CCCCO Program and Course Approval Handbook (PCAH)?

Yes

Are library resources needed for this course?

No library resources are needed for this course.

Do you have any special concerns/needs or comments? If yes, describe.

No Value

Have you included documentation, if necessary, by uploading file(s) in the Cover Info tab? For example, advisory committee meeting minutes, C-ID descriptor, etc.)

Yes, I have uploaded file(s).

If this is a new course, have you attached the completed class capacity form, with required approvals, and uploaded the file in the Cover Info tab?

Yes, I have uploaded the class capacity form that includes all required approvals.

If you are requesting Distance Education, did you complete the DE addendum tab?

Yes

If requesting transferability, have you completed the comparable courses field?

Not requesting transferability

Add any additional comments you want reviewers to read.

No Value